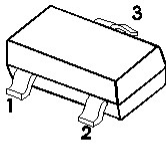


## SOT-23

## SOT-23 贴片塑封开关三极管

## SOT-23 Plastic-Encapsulate Switching Transistors



1. BASE  
2. EMITTER  
3. COLLECTOR

Marking: 2T

## 特征 Features

- 最大功率耗散 300mW; Power Dissipation of 300mW
- 高稳定性和可靠性。High Stability and High Reliability

## 机械数据 Mechanical Data

- 封装: SOT-23 封装 SOT-23 Small Outline Plastic Package
- 环氧树脂 UL 易燃等级 Epoxy UL: 94V-0
- 安装位置: 任意 Mounting Position: Any

极限值和温度特性(TA = 25°C 除非另有规定)

Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

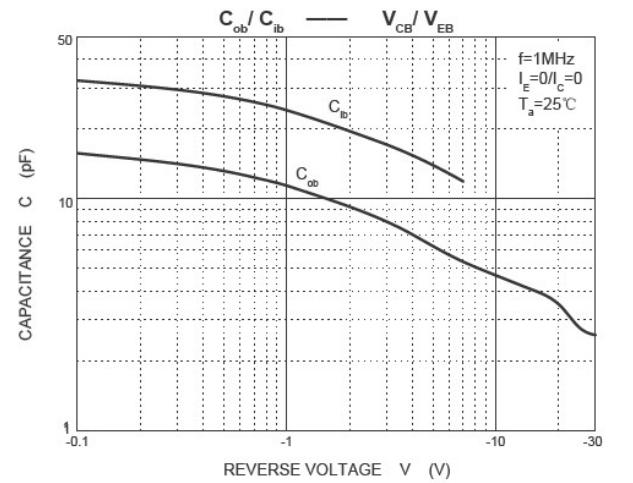
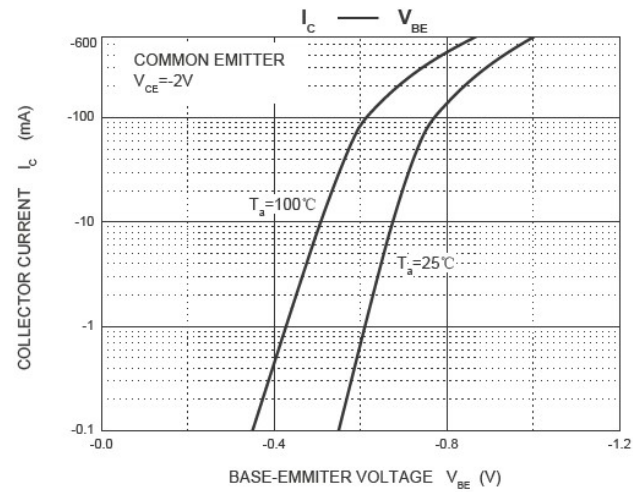
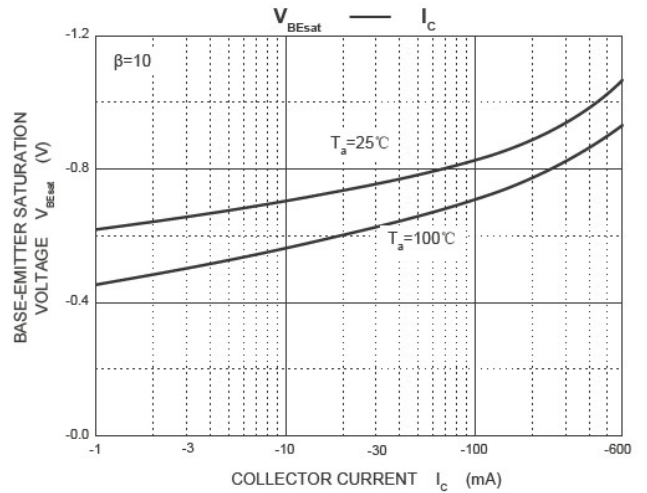
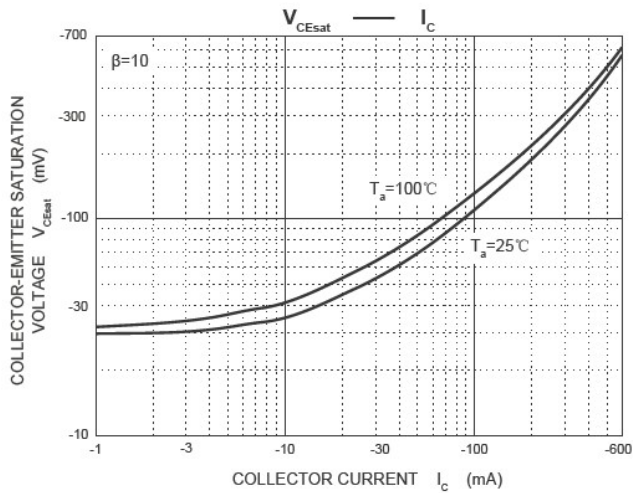
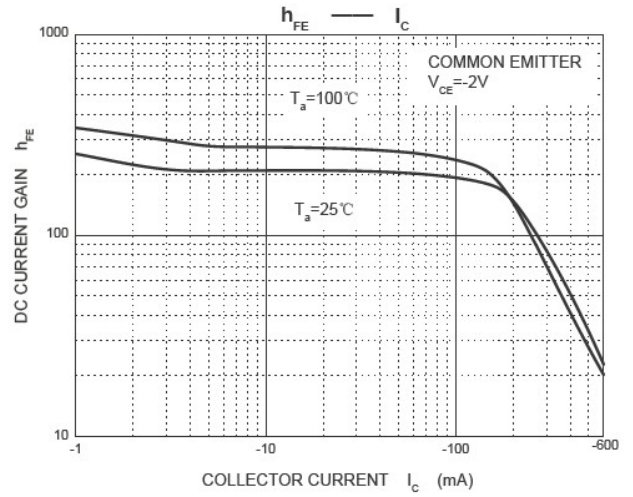
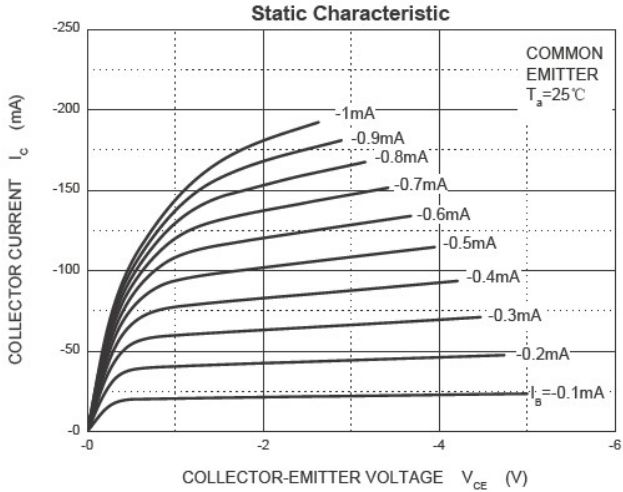
参数 Parameters	符号 Symbol	数值 Value	单位 Unit
Collector-Base Voltage	V <sub>CB0</sub>	-40	V
Collector-Emitter Voltage	V <sub>CEO</sub>	-40	V
Emitter -Base Voltage	V <sub>EBO</sub>	-5	V
Collector Current-Continuous	I <sub>C</sub>	-600	mA
Collector Power Dissipation	P <sub>C</sub>	300	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55-+150	°C
Thermal resistance From junction to ambient	R <sub>θJA</sub>	417	°C/W

电特性 (TA = 25°C 除非另有规定)

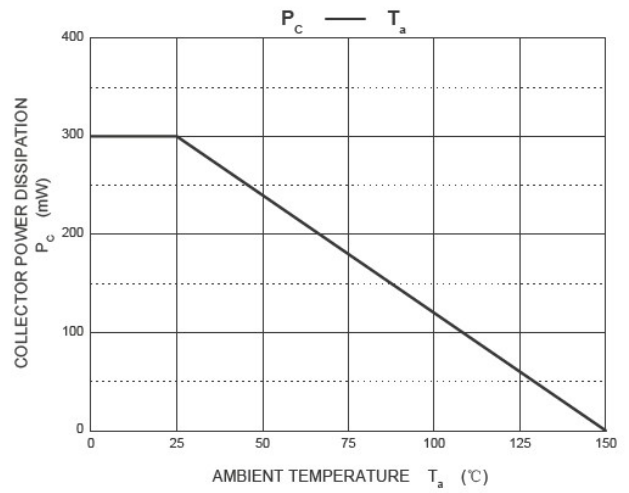
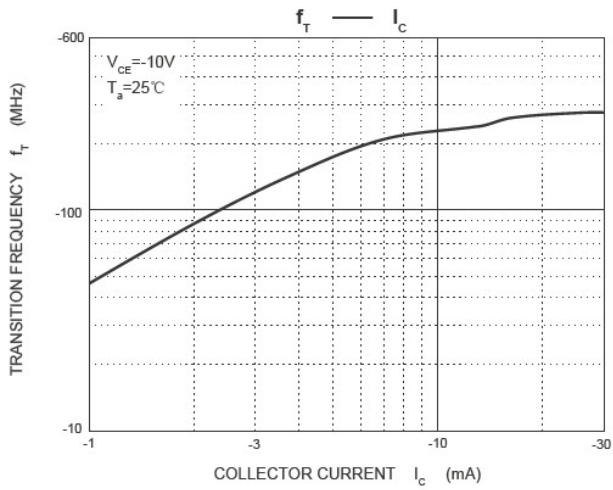
Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

参数 Parameter	符号 Symbols	测试条件 Test Condition	界限 Limits		单位 Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	IC=-100uA, IE=0	-40		V
Collector-emitter breakdown voltage	V(BR)CEO	IC=-1mA, IB=0	-40		V
Emitter-base breakdown voltage	V(BR)EBO	IE=-100uA, IC=0	-5		V
Collector cut-off current	ICBO	V <sub>CB</sub> =-35V, IE=0		-100	nA
Collector cut-off current	ICEX	V <sub>CE</sub> =-35V, V <sub>EB(off)</sub> =-0.4V		-100	nA
Emitter cut-off current	IEBO	V <sub>EB</sub> =-4V, IC=0		-100	nA
DC current gain	hFE(1)	V <sub>CE</sub> =-1V, IC=-0.1mA	30		
	hFE(2)	V <sub>CE</sub> =-1V, IC=-1mA	60		
	hFE(3)	V <sub>CE</sub> =-1V, IC=-10mA	100		
	hFE(4)	V <sub>CE</sub> =-2V, IC=-150mA	100	300	
	hFE(5)	V <sub>CE</sub> =-2V, IC=-500mA	20		
Collector-emitter saturation voltage	VCE(sat)	IC=-150mA, IB=-15mA		-0.40	V
		IC=-500mA, IB=-50mA		-0.75	V
Base -emitter saturation voltage	VBE(sat)	IC=-150mA, IB=-15mA		-0.95	V
		IC=-500mA, IB=-50mA		-1.30	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =-10V, IC=-20mA, f=100MHz	200		MHz
Delay time	t <sub>d</sub>	V <sub>CC</sub> =-30V, V <sub>BE(off)</sub> =-0.5V, IC=-150mA, IB1=-15mA		15	nS
Rise time	t <sub>r</sub>			20	nS
Storage time	t <sub>s</sub>			225	nS
Fall time	t <sub>f</sub>			60	nS

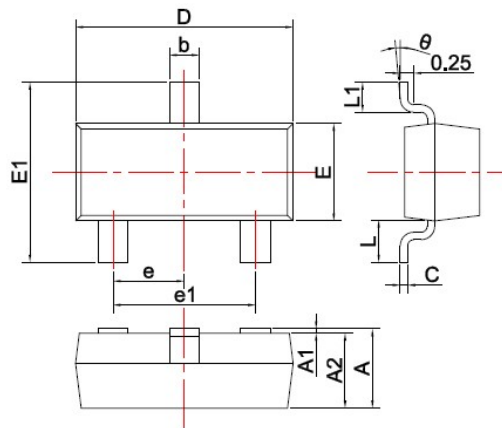
Typical characteristics



# MMBT4403



## SOT-23 PACKAGE OUTLINE Plastic surface mounted package

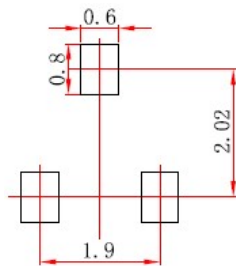


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
$\theta$	0 $^\circ$	8 $^\circ$

Unit: mm

## 焊盘设计参考 Precautions: PCB Design

Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs



- Note:
1. Controlling dimension: In millimeters.
  2. General tolerance:  $\pm 0.05$  mm.
  3. The pad layout is for reference purposes only.